

AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended) An antenna comprising:

a first core made of first magnetic material;

a coil including a conductive wire having a portion wound around a predetermined region of the first core; and

a second core made of second magnetic material, the second core coil being operable to move ~~at an inside of the coil~~ within an area between the portion of the conductive wire and the first core.

Claim 2 (Original) The antenna according to claim 1,

wherein the first core has a recess provided therein, and

wherein the second core is operable to move in the recess of the first core.

Claim 3 (Original) The antenna according to claim 1, wherein the coil has a first region and a second region where the conductive wire is wound at a density larger than a density of the conductive wire at the first region.

Claim 4 (Currently Amended) The antenna according to claim 3 †, wherein the second region of the coil is provided at an end of the coil.

Claim 5 (Original) The antenna according to claim 1, wherein the second magnetic material has a magnetic permeability larger than a magnetic permeability of the first magnetic material.

Claim 6 (Original) The antenna according to claim 1, wherein the second magnetic material comprises magnetic material of Mn ferrite.

Claim 7 (Original) The antenna according to claim 1, wherein the first magnetic material comprises magnetic material of Ni ferrite.

Claim 8 (Original) The antenna according to claim 1, wherein the first magnetic material comprises magnetic material of rare earth material.

Claim 9 (Original) The antenna according to claim 1, wherein the second magnetic material comprises magnetic material of rare earth material.

Claim 10 (Original) The antenna according to claim 1, wherein the first magnetic material and the second magnetic material are identical to each other.

Claim 11 (Currently Amended) A communication system comprising:

- a first communication device;
- an antenna connected to the first communication device, the antenna including
 - a first core made of first magnetic material,
 - a coil having a portion wound around over a predetermined area of an outer surface of the first core, and
 - a second core made of second magnetic material, the second core coil being operable to move ~~at an inside of the coil along the predetermined area of the first core within an area between the portion of the coil and the first core~~; and
 - a second communication device operable to communicate with the first communication device via the antenna.

Claim 12 (New) An antenna comprising:

- a first core made of first magnetic material;
- a coil including a conductive wire wound around a predetermined region of the first core; and
- a second core made of second magnetic material, the second core being operable to move inside of the coil,
 - wherein the first core has a recess provided therein, and
 - wherein the second core is operable to move in the recess of the first core.

Claim 13 (New) The antenna according to claim 12, wherein the coil has a first region and a second region where the conductive wire is wound at a density larger than a density of the conductive wire at the first region.

Claim 14 (New) The antenna according to claim 13, wherein the second region of the coil is provided at an end of the coil.

Claim 15 (New) The antenna according to claim 12, wherein the second magnetic material has a magnetic permeability larger than a magnetic permeability of the first magnetic material.

Claim 16 (New) The antenna according to claim 12, wherein the second magnetic material comprises magnetic material of Mn ferrite.

Claim 17 (New) The antenna according to claim 12, wherein the first magnetic material comprises magnetic material of Ni ferrite.

Claim 18 (New) The antenna according to claim 12, wherein the first magnetic material comprises magnetic material of rare earth material.

Claim 19 (New) The antenna according to claim 12, wherein the second magnetic material comprises magnetic material of rare earth material.

Claim 20 (New) The antenna according to claim 12, wherein the first magnetic material and the second magnetic material are identical to each other.

Claim 21 (New) A communication system comprising:

a first communication device;

an antenna connected to the first communication device, the antenna including

a first core made of first magnetic material,
 a coil including a conductive wire wound around a predetermined region of the first core, and
 a second core made of second magnetic material, the second core being operable to move inside of the coil,
 wherein the first core has a recess provided therein, and
 wherein the second core is operable to move in the recess of the first core; and
 a second communication device operable to communicate with the first communication device via the antenna.

Claim 22 (New) An antenna comprising:

 a first core made of first magnetic material;
 a coil including a conductive wire wound around a predetermined region of the first core; and
 a second core made of second magnetic material, the second core being operable to move inside of the coil,
 wherein the coil has a first region and a second region where the conductive wire is wound at a density larger than a density of the conductive wire at the first region.

Claim 23 (New) The antenna according to claim 22, wherein the second region of the coil is provided at an end of the coil.

Claim 24 (New) The antenna according to claim 22, wherein the second magnetic material has a magnetic permeability larger than a magnetic permeability of the first magnetic material.

Claim 25 (New) The antenna according to claim 22, wherein the second magnetic material comprises magnetic material of Mn ferrite.

Claim 26 (New) The antenna according to claim 22, wherein the first magnetic material comprises magnetic material of Ni ferrite.

Claim 27 (New) The antenna according to claim 22, wherein the first magnetic material comprises magnetic material of rare earth material.

Claim 28 (New) The antenna according to claim 22, wherein the second magnetic material comprises magnetic material of rare earth material.

Claim 29 (New) The antenna according to claim 22, wherein the first magnetic material and the second magnetic material are identical to each other.

Claim 30 (New) A communication system comprising:

- a first communication device;
- an antenna connected to the first communication device, the antenna including
 - a first core made of first magnetic material,
 - a coil including a conductive wire wound around a predetermined region of the first core, and
 - a second core made of second magnetic material, the second core being operable to move inside of the coil,
 - wherein the coil has a first region and a second region where the conductive wire is wound at a density larger than a density of the conductive wire at the first region; and
 - a second communication device operable to communicate with the first communication device via the antenna.